

In the Claims

The claims are as follows:

1 1 - 21 (canceled)

1 22. (newly added) A water feeder controller for a boiler, comprising:

2 a delay timer having a delay timer period, the delay timer being responsive to a

3 low water signal;

4 a feed counter; and

5 a feed timer having a feed timer period, the feed timer being connected to the

6 delay timer to begin timing for the feed timer period after the delay timer

7 period, the feed timer being configured to turn on a feed valve during the

8 feed timer period, and the feed timer being connected to the feed counter to

9 increment the feed counter during the feed timer period.

1 23. (newly added) The water feeder controller of claim 22, further comprising

2 an input for receiving a low water signal from a sensor, the signal indicating a low

3 water level in the boiler.

1 24. (newly added) The water feeder controller of claim 22, further comprising an

2 output configured to connect to the feed valve, wherein the feed valve is adapted to

3 supply water to the boiler at a predetermined feed rate.

4 25. (newly added) The water feeder controller of claim 22, further comprising a
5 display connected to the feed counter, wherein the display is configured to display
6 a number corresponding to a quantity of water supplied by the feed valve to the
7 boiler.

1 26. (newly added) The water feeder controller of claim 25, further comprising a
2 display reset button configured to reset the feed counter and thereby reset the
3 display to a zero quantity of water supplied by the feed valve to the boiler.

1 27. (newly added) The water feeder controller of claim 22, further comprising a
2 microcontroller, wherein the delay timer, the feed timer and the feed counter are
3 implemented in software in the microcontroller.

1 28. (newly added) The water feeder controller of claim 27, wherein the delay
2 timer includes a delay loop in the software, wherein the delay loop repetitively
3 cycles through program steps of the software during the delay period.

1 29. (newly added) A water feeder controller for a boiler, comprising:
2 a low water cutoff sensor positioned with the boiler, the lower water cutoff
3 sensor adapted to transmit a low water signal indicative of a low water level
4 in the boiler;

5 a feed timer adapted to feed water to the boiler for a predetermined feed period
6 of time, wherein the feed timer feeds water to the boiler for a full feed cycle
7 to bring the water level in the boiler above the low water cutoff sensor; and
8 a delay timer for measuring a delay period of time responsive to the low water
9 signal.

1 30. (newly added) The water feeder controller of claim 29, further comprising a
2 display configured to indicate a quantity of water supplied to the boiler based on a
3 feed counter incremented during water feeding.

1 31. (newly added) The water feeder controller of claim 29, further comprising a
2 manual feed button that is operable to allow water to be manually fed to the boiler.

1 32. (newly added) The water feeder controller of claim 29, further comprising
2 an input for receiving the low water signal from the low water cutoff sensor.

1 33. (newly added) The water feeder controller of claim 29, further comprising
2 an output for connection to a feed valve capable of supplying water to the boiler at
3 a predetermined feed rate.

1 34. (newly added) A method of controlling a water feeder controller for a boiler,
2 comprising:

3 feeding water to the boiler for a predetermined feed period of time if a received
4 low water signal indicates insufficient water in the boiler; and
5 displaying a total quantity of water supplied to the boiler based on the period of
6 time water is fed to the boiler.

1 35. (newly added) The method of claim 34, further comprising delaying for a
2 delay period of time after receiving the low water signal.

1 36. (newly added) The method of claim 35, further comprising checking the
2 low water signal after the delay period.

1 37. (newly added) The method of claim 34, further comprising checking the
2 number of times said feeding has been sequentially started.

1 38. (newly added) The method of claim 37, further comprising preventing said
2 feeding if the number of times said feeding has been sequentially started exceeds a
3 desired value.

1 39. (newly added) The method of claim 34, further comprising manually
2 feeding water to the boiler by depressing a manual feed button.

1 40. (newly added) The method of claim 34, further comprising stopping said
2 feeding when sufficient water in the boiler is sensed.